

REMARKS

This Amendment is filed in response to the Office Action mailed Nov. 14, 2007. The Applicant respectfully requests reconsideration. The objections and rejections are respectfully traversed.

Claims 1-28 are pending in the case.

Claims 1, 18, 24, 25, 26 and 27 have been amended to address typographical errors

No additional claims have been added.

Claim Objections

At paragraph 6 of the Office Action, claims 1-13 and 18-24 were objected to due to a typographical error.

At paragraph 7 of the Office Action, claims 25-28 were objected to due to a typographical error.

The Applicant has corrected these typographical errors and believes these claims are now non-objectable.

At paragraph 8 of the Office Action, the Examiner comments that claims 27 and 28 appear as substantial duplicates of certain other claims. The Applicant notes claims 27 and 28 were intended to depend from claim 25, and that dependency from claim 1 was a typographical error. The Applicant has amended the claims to depend from the proper independent claim, and as such, believes they no longer will be considered substantial duplicates.

Claim Rejections - 35 U.S.C. §102

At paragraphs 9-20 of the Office Action, claims 1-5, 8, 9, 11, 14, 15, 17-19, and 21-28 were rejected under 35 U.S.C. §102(e) over Kwan et al., U.S. Publication No. 2003/0055570 (hereinafter "Kwan").

The Applicant's claim 1, representative in part of the other rejected claims, sets forth:

1. A method for implementing port-based network access control at a shared media port in an intermediate node, the shared media port being coupled to a plurality of client nodes, the method comprising:
 - partitioning the shared media port into a plurality of logical sub-interfaces, each logical subinterface dedicated to providing access to a different network or subnetwork accessible through the intermediate node;*
 - receiving a data packet at the shared media port from a first client node;
 - associating the received data packet with a first logical subinterface in the plurality of logical subinterfaces;*
 - determining whether the first client node is authenticated to communicate over the first logical subinterface's dedicated network or subnetwork;* and
 - if the first client node is determined to be authenticated to communicate over the first logical subinterface's dedicated network or subnetwork, forwarding the received data packet over the first logical subinterface's dedicated network or subnetwork;
 - receiving a second data packet at the shared media port from a second client node;
 - associating the second received data packet with the first logical subinterface;
 - determining whether the second client node is authenticated to communicate over the first logical subinterface's dedicated network or subnetwork;
 - if the second client node is determined to not be authenticated to communicate over the first logical subinterface's dedicated network or subnetwork, preventing the second received data packet from being forwarded over the first logical subinterface's dedicated network or subnetwork, while still allowing data packets from the first client node to be forwarded if the first client node is determined to be authenticated.

Kwan discusses a multi-tiered network security system. *See* paragraphs 0008 and 0028. A "first level comprises physical MAC address authentication of a user device... coupled to a port of a network access device." *See* paragraph 0028 "[I]f packets received from user device 108 have a source MAC address that does not match any of the secure addresses... the network access device 102 either drops the packets or, alternately disable

the port entirely.” See paragraph 0039 and Fig. 3, box 308. “The second level comprises authentication of the user of the user device, such as authentication in accordance with the IEEE 802.1x standard.” See paragraph 0028. “[I]f the user is not valid...network access device 102 blocks all traffic on the port except for the reception or transmission of packets related to the user authentication protocol (802.1x control packets).” See paragraph 0039 and Fig. 3, box 314. “The third level comprises dynamic assignment of a particular user policy to the port based on the identity of the user...”, for example, to determine if resources are available to service the user device.” See paragraph 0028 and 0042. “If sufficient resources are not available, then network access device 102 blocks all traffic on the port except for the reception or transmission of packets related to the user authentication protocol (802.1x control packets).” See paragraph 0039 and Fig. 3, box 322.

Of note, Kwan’s basic unit for applying security measures is the port. Kwan does not envision dividing, or otherwise partitioning, a port into smaller logical units.

The Applicant respectfully directs the Examiners attention to the limitations of “*partitioning the shared media port into a plurality of logical subinterfaces, each logical subinterface dedicated to providing access to a different network or subnetwork accessible through the intermediate node*” and “*associating the received data packet with a first logical subinterface in the plurality of logical subinterfaces*” and “*determining whether the first client node is authenticated to communicate over the first logical subinterface’s dedicated network or subnetwork.*”

Rather than apply security measures to an entire port, the Applicant *partitions* a port into *a plurality of logical subinterfaces, each logical subinterface dedicated to providing access to a different network or subnetwork*. The Applicant then authenticates a client to communicate over a particular logical subinterface. For background regarding logical subinterfaces, the Applicant respectfully directs the Examiner’s attention to page 8, lines 2-13 of the specification.

Kwan does not teach partitioning and authenticating at the subinterface level. The Applicant respectfully urges that the portions of Kwan cited in the Office Action in relation to the claimed partitioning, actually discuss differing types of arrangements.

For example, paragraph 0009 describes that “one or more computing devices are coupled to a single port of a switch via a central computing device.” Such description relates to a wiring arrangement of separate devices. Multiple devices are attached to some aggregating device (akin to a hub) that in turn is attached to a port. There is no suggestion in paragraph 0009 that the port itself is somehow partitioned into smaller logical units.

Further, paragraphs 0009 and 0010 discuss “dynamically assigning a port of a network access device to a predetermined VLAN....” Such description relates to a port being assigned to a larger group (i.e. a group of ports designated as a VLAN). The description does not suggest the port itself is partitioned into smaller logical units.

Accordingly, the Applicant respectfully urges that Kwan is legally insufficient to anticipate the present claims under 35 U.S.C. §102 because of the absence of the Applicant’s claimed novel “*partitioning the shared media port into a plurality of logical subinterfaces, each logical subinterface dedicated to providing access to a different network or subnetwork accessible through the intermediate node*” and “*associating the received data packet with a first logical subinterface in the plurality of logical subinterfaces*” and “*determining whether the first client node is authenticated to communicate over the first logical subinterface’s dedicated network or subnetwork.*”

Claim Rejections - 35 U.S.C. §103

At paragraphs 21-29 of the Office Action, claims 6 and 10 were rejected under 35 U.S.C. §103(a) over Kwan in view of Ng et al., U.S. Publication No. 2005/0177865 (hereinafter Ng).

At paragraphs 30-34 of the Office Action, claims 7, 16 and 20 were rejected under 35 U.S.C. §103(a) over Kwan in view of Haverinen et al., U.S. Publication No. 2004/0208151 (hereinafter Haverinen).

At paragraphs 35-38 of the Office Action, claim 12 was rejected under 35 U.S.C. §103(a) over Kwan and in further view of Inoue et al., U.S. Patent No. 6,891,819 (hereinafter Inoue).

At paragraphs 39-42 of the Office Action, claim 13 was rejected under 35 U.S.C. §103(a) over Kwan and in further view of Roese, U.S. Publication No. 2004/0158735 (hereinafter Roese).

The Applicant notes that all of the claims rejected under U.S.C. §103 are dependent claims which depended from independent claims believed to be allowable. Accordingly, the dependent claims are also believed to be allowable for at least this reason as well as for other separate reasons.


Should the Examiner believe telephonic contact would be helpful in the disposition of this Application, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

In summary, all the independent claims are believed to be in condition for allowance and therefore all dependent claims that depend there from are believed to be in condition for allowance. The Applicant respectfully solicits favorable action.

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Respectfully submitted,


James A. Blanchette
Reg. No. 51,477
CESARI AND MCKENNA, LLP
88 Black Falcon Avenue
Boston, MA 02210-2414
(617) 951-2500